

stored energy solutions for a demanding world

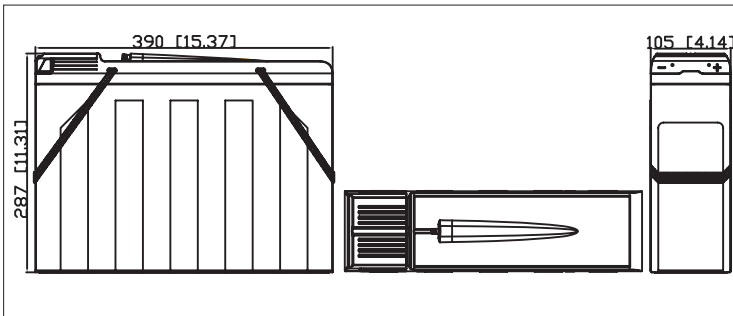
Model: **12NDF100**



The Acme F range of front access VRLA batteries has been specifically designed for applications using 19" and 23" cabinets, especially telecoms . Reliability is assured with the patented post seal and a state-of-the-art AGM design developed to comply with the latest IEC, British and Telcordia standards. A 12+ years design life and centralised venting system add to the suitability and flexibility of this superior range.



**Dimensions—mm [inch]**



**Specifications**

Battery Model	12NDF100
Nominal Voltage	12V
Rated Capacity	100Ah (10 hour rate) to 1.80V/cell @25°C(77°F)
Typical Weight	33. 5kg
Internal Resistance	Approx 6. 31mΩ
Temperature Ranges	Operation (maximum): -40°C to 55°C(-40°F to 131°F)
	Operation (recommended): 15°C to 25°C(59°F to 77°F)
	Storage: -20°C to 40°C(-4°F to 104°F)
Float Voltage	2.25V/cell@25°C(77°F)
Recommended Maximum Charging Current Limit	25A
Equalize and Cycle Service	2.35V~2.40V/cell@25°C(77°F)
Self Discharge	The residual capacity is above 90% after 90 days storage(25°C/77°F)
Terminal	M6 Female
Terminal Hardware Torque	10 ± 1. 0Nm
Container Material	ABS (V0 optional)

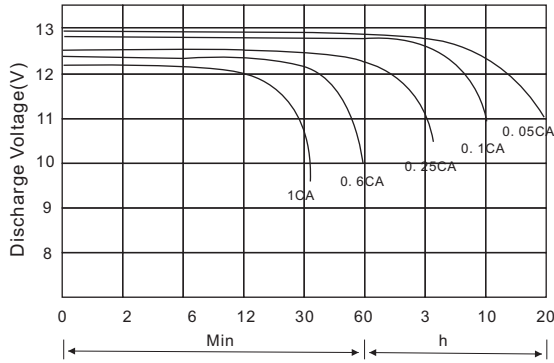
**Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)**

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1. 60V	361	194	118	85. 3	68. 9	39. 5	28. 7	22. 5	19. 0	16. 3	12. 5	10. 3	8. 68	5. 44	4. 54
1. 67V	339	187	116	84. 6	68. 5	39. 3	28. 2	22. 4	18. 9	16. 2	12. 4	10. 2	8. 67	5. 39	4. 50
1. 70V	336	184	114	84. 0	68. 0	39. 0	28. 0	22. 3	18. 6	16. 0	12. 4	10. 2	8. 58	5. 38	4. 50
1. 75V	309	178	113	83. 4	67. 0	38. 0	27. 7	22. 0	18. 5	15. 9	12. 3	10. 1	8. 58	5. 37	4. 50
1. 80V	277	166	108	80. 0	65. 3	37. 7	27. 5	21. 9	18. 1	15. 6	12. 2	10. 0	8. 51	5. 31	4. 49
1. 83V	264	152	106	77. 3	62. 4	37. 2	26. 6	20. 9	17. 5	15. 1	11. 9	9. 63	8. 09	5. 30	4. 42
1. 85V	247	148	98. 6	74. 3	60. 5	35. 8	25. 9	20. 7	17. 1	14. 7	11. 5	9. 55	8. 00	5. 20	4. 38

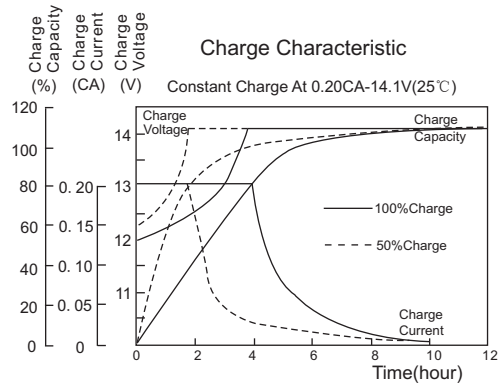
**Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)**

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1. 60V	604	341	213	160	130	74. 6	54. 5	43. 2	36. 4	31. 4	24. 3	20. 0	16. 8	10. 8	9. 02
1. 67V	581	335	211	159	129	74. 4	53. 8	43. 1	36. 4	31. 2	24. 2	19. 8	16. 8	10. 7	9. 02
1. 70V	578	331	211	159	129	74. 1	53. 8	42. 9	35. 9	31. 0	24. 0	19. 6	16. 7	10. 7	9. 00
1. 75V	539	329	210	158	127	73. 7	53. 2	42. 9	35. 9	30. 9	23. 8	19. 6	16. 6	10. 7	9. 00
1. 80V	495	311	205	155	126	73. 5	53. 1	42. 8	35. 3	30. 6	23. 7	19. 6	16. 6	10. 7	8. 98
1. 83V	473	285	203	150	121	72. 6	51. 8	41. 2	34. 5	29. 7	23. 5	19. 1	16. 1	10. 7	8. 92
1. 85V	442	278	188	144	117	70. 2	50. 4	40. 7	33. 7	29. 1	22. 8	18. 9	15. 9	10. 5	8. 85

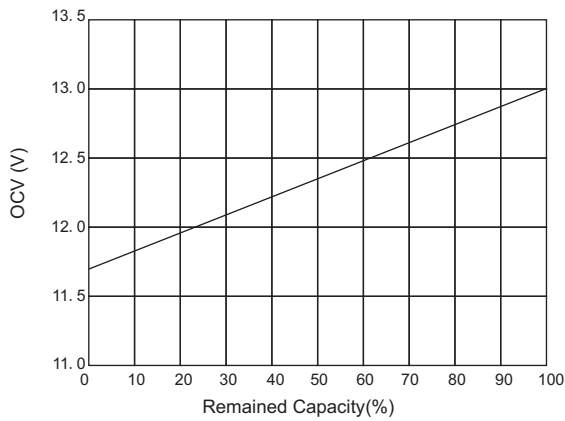
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



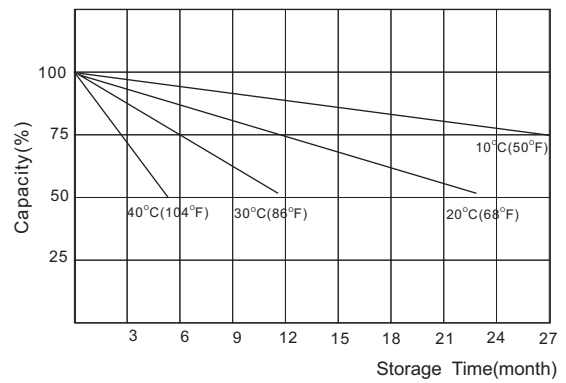
Battery Voltage Vs. Charge Time



Relationship of OCV Vs. State of Charge



Capacity Retention Characteristic



Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle	25°C	2.40	2.35~2.45	0.25C
Standby	25°C	2.25	2.23~2.27	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.80	1.70	1.55	1.30
Discharge Current (A)	0.2C ≥ (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

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